

DETAILED ACTION

1. This communication is responsive to the application filed on June 16, 2011.
Claims 1-9,15, and 18 are pending and presented for prosecution.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-3,5-9 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior art in view of Hoffmann et al. (US 2005/0063343) in view of Proctor, Jr. et al. (US Patent #6,941,152).

Regarding claim 1, Admitted Prior Art teaches a method of communication in transmitting/receiving stations in a wireless communication network, in which multi-receiver frames are exchanged between a station and a plurality of other stations indicating the transmitting station and the receiving station operate in an omnidirectional manner using omnidirectional antennas at the transmitting station and at the receiving station (Page 2, lines 5-8; lines 21-27), and mono-receiver frames are exchanged between the transmitting station and the receiving station (Page 2, lines 23-24), but does not specifically teach when operating in a directional manner using a directional

antennas at the transmitting station and at the receiving station, wherein the transmission in an omnidirectional manner is effected in a more robust fashion than the transmission in a directional manner using a directional antenna.

However, in related art, Hoffmann teaches when operating in a directional manner using a directional antennas at the transmitting station and at the receiving station (*See Abstract, Paragraphs 0014 and claims 1, 13,20, and 31*). Therefore, it would have obvious to one of ordinary skill in the art at the time of the invention to provide the above teaching of Hoffmann to Admitted Prior Art in order to suppress the interference power from other mobile stations.

The combination of Admitted Prior Art and Hoffmann fail to teach wherein the transmission in an omnidirectional manner is effected in a more robust fashion than the transmission in a directional manner using a directional antenna.

However, in related art, Proctor, Jr. teaches wherein the transmission in an omnidirectional manner is effected in a more robust fashion than the transmission in a directional manner using a directional antenna (Col 1, lines 18-48; Col 4, line 59-Col 5, line 33). Therefore, it would have obvious to one of ordinary skill in the art at the time of the invention to provide the above teaching of Proctor, Jr. to Admitted Prior Art and Hoffmann in order to reduce interference.

Regarding claim 2, the combination of Admitted Prior Art, Hoffmann and Proctor, Jr. teach all the claimed elements in claim 1. In addition, Proctor, Jr. teaches the method according to claim 1, wherein the more robust transmission is effected at a lower throughput than the less robust transmission (Col 4, line 59-Col 5, line 33).

Regarding claim 3, the combination of Admitted Prior Art, Hoffmann and Proctor, Jr. teach all the claimed elements in claim 1. In addition, Proctor, Jr. teaches the method, wherein the mono-receiver frames are modulated by a modulation with a first number of phases and in that the multi-receiver frames are modulated by a modulation with a second number of phases, and in that the first number of phases is greater than the second number of phases (Col 4, line 59-Col 5, line 33).

Regarding claim 5, the combination of Admitted Prior Art, Hoffmann and Proctor, Jr. teach all the claimed elements in claim 1. In addition, Proctor, Jr. teaches the method, wherein the mono-receiver frames are coded with a first forward error correction rate and the multi-receiver frames are coded with a second forward error correction rate, and in that the first rate is higher than the second rate (Col 4, line 59-Col 5, line 33).

Regarding claim 6, the combination of Admitted Prior Art, Hoffmann and Proctor, Jr. teach all the claimed elements in claim 5. In addition, Admitted Prior Art teaches the method, wherein the mono-receiver frames and the multi-receiver frames are modulated by the same modulation (Page 2, lines 17-36).

Regarding claim 7, the combination of Admitted Prior Art, Hoffmann and Proctor, Jr. teach all the claimed elements in claims 5 and 12. In addition, admitted Prior Art teaches the method, wherein the transmission is in compliance with one of the standards belonging to the set comprising: Hiperlan type 2; and IEEE802.11a (Page 1, lines 24-25).

Regarding claim 8, the combination of Admitted Prior Art, Hoffmann and Proctor, Jr. teach all the claimed elements in claim 1. In addition, admitted Prior Art teaches the method, wherein the transmission is in compliance with IEEE 802.11g (Page 1, lines 24-25).

Regarding claim 9, Admitted Prior Art teaches a transmitting and/or receiving station for a wireless communication network, wherein said station comprises an omnidirectional antenna (Page 2, lines 25-27) to transmit and/or receive multi-receiver frames in an omnidirectional manner indicating the transmitting and the receiving station (Page 2, lines 5-8; lines 21-27) and at least one antenna to transmit and/or receive mono-receiver frames (Page 2, lines 23-24), determined by the multi-receiver frames (Page 2, lines 5-25), but does not specifically teach directional antenna to transmit and receive in a directional manner and the transmission in a omnidirectional manner being effected in a more robust fashion than the transmission in a directional manner.

However, in related art, Hoffmann teaches directional antenna to transmit and receive in a directional manner (*See Abstract, Paragraphs 0014 and claims 1, 13,20, and 31*). Therefore, it would have obvious to one of ordinary skill in the art at the time of the invention to provide the above teaching of Hoffmann to Admitted Prior Art in order to suppress the interference power from other mobile stations.

The combination of Admitted Prior Art and Hoffmann fail to teach the transmission in a omnidirectional manner being effected in a more robust fashion than the transmission in a directional manner

However, in related art, Proctor, Jr. teaches the transmission in a omnidirectional manner being effected in a more robust fashion than the transmission in a directional manner (Col 1, lines 18-48; Col 4, line 59-Col 5, line 33). Therefore, it would have obvious to one of ordinary skill in the art at the time of the invention to provide the above teaching of Proctor, Jr. to Admitted Prior Art and Hoffmann in order to reduce interference.

Regarding claim 18, the combination of Admitted Prior Art, Hoffmann and Proctor, Jr. teach all the claim element in claim 9. In addition, Proctor, Jr. teaches wireless communication network wherein it comprises several transmitting and/or receiving stations (Proctor, Jr., Figure 2 and Admitted Prior Art, Page 1, lines 33-35).

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art in view of Hoffmann et al. (US 2005/0063343) in view of Proctor, Jr. et al. (US Patent #6,941,152) and further in view of Trompower (US Patent #6,132,306).

Regarding claim 4, the combination of Admitted Prior Art, Hoffmann and Proctor, Jr. fail to teach the method, wherein the mono-receiver frames are modulated by a modulation with more than two phases and in that the multi-receiver frames are modulated by a two phases modulation.

However, in related art, Trompower teaches the method, wherein the mono-receiver frames are modulated by a modulation with more than two phases and in that the multi-receiver frames are modulated by a two phases modulation (Col 11, lines 17-

34). Therefore, it would have obvious to one of ordinary skill in the art at the time of the invention to provide the above teaching of Trompower to Admitted Prior Art, Hoffmann and Proctor, Jr. in order to avoid interference.

5. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art in view of Hoffmann et al. (US 2005/0063343) in view of Proctor, Jr. et al. (US Patent #6,941,152) and further in view of Pekonen et al. (US Patent #7,092,672).

Regarding claim 15, the combination of Admitted Prior Art, Hoffmann and Proctor, Jr. teach all the claimed elements in claim 9, except the station, wherein it comprises four directional antennas oriented at 90 degree with respect to one another.

However, in related art, Pekonen teaches station, wherein it comprises four directional antennas oriented at 90 degree with respect to one another (Col 4, lines 35-55). Therefore, it would have obvious to one of ordinary skill in the art at the time of the invention to provide the above teaching of Pekonen to Admitted Prior Art, Hoffmann and Proctor, Jr. in order to enable the antenna's angle of coverage to be adjusted.

6. Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully

consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner. SEE MPEP 2141.02 [R-5] VI. PRIOR ART MUST BE CONSIDERED IN ITS ENTIRETY, INCLUDING DISCLOSURES THAT TEACH AWAY FROM THE CLAIMS: A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984) In re Fulton, 391 F.3d 1195, 1201, 73 USPQ2d 1141, 1146 (Fed. Cir. 2004). >See also MPEP §2123.

Response to Arguments

7. Applicant's arguments filed 08/12/2010 with respect to the rejection(s) of claim(s) 1-9,15, and 18 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Hoffmann et al. (US 2005/0063343).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DOMINIC E. REGO whose telephone number is (571)272-8132. The examiner can normally be reached on Monday-Friday, 9:00 am-5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duc M. Nguyen can be reached on 571-272-7503. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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